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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	AUG 09	INSPEC enhanced with 1898-1968 archive
NEWS 4	AUG 28	ADISCTI Reloaded and Enhanced
NEWS 5	AUG 30	CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 6	SEP 21	CA/CAplus fields enhanced with simultaneous left and right truncation
NEWS 7	SEP 25	CA(SM)/CAplus(SM) display of CA Lexicon enhanced
NEWS 8	SEP 25	CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS 9	SEP 25	CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS 10	SEP 28	CEABA-VTB classification code fields reloaded with new classification scheme
NEWS 11	OCT 19	LOGOFF HOLD duration extended to 120 minutes
NEWS 12	OCT 19	E-mail format enhanced
NEWS 13	OCT 23	Option to turn off MARPAT highlighting enhancements available
NEWS 14	OCT 23	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 15	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS 16	OCT 30	CHEMLIST enhanced with new search and display field
NEWS 17	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS 18	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS 19	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS 20	NOV 20	CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS 21	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS 22	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS 23	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS 24	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS 25	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS 26	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 27	DEC 18	CA/CAplus patent kind codes updated
NEWS 28	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS 29	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS 30	DEC 27	CA/CAplus enhanced with more pre-1907 records

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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=> stress (w) response and coli and strain and mutant
STRESS IS NOT A RECOGNIZED COMMAND
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=> s stress (w) response and coli and strain and mutant
L1 486 STRESS (W) RESPONSE AND COLI AND STRAIN AND MUTANT

=> s li and exogenous
L2 820 LI AND EXOGENOUS

=> s l2 and lyase
L3 2 L2 AND LYASE

=> l2 and peroxide
L2 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l2 and peroxide
L4 5 L2 AND PEROXIDE

=> d ibib abs l3 1-2 and l4 1-5
L4 IS NOT VALID HERE
For an explanation, enter "HELP DISPLAY".

=> d ibib abs l3 1-2

L3 ANSWER 1 OF 2 MEDLINE on STN
ACCESSION NUMBER: 2004519266 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15466221
TITLE: Unique and overlapping expression patterns among the Arabidopsis 1-amino-cyclopropane-1-carboxylate synthase gene family members.
AUTHOR: Tsuchisaka Atsunari; Theologis Athanasios
CORPORATE SOURCE: Plant Gene Expression Center, Albany, California 94710, USA.
SOURCE: Plant physiology, (2004 Oct) Vol. 136, No. 2, pp. 2982-3000. Electronic Publication: 2004-10-01. Journal code: 0401224. ISSN: 0032-0889.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AY680407; GENBANK-AY680408; GENBANK-AY680409; GENBANK-AY680410; GENBANK-AY680411; GENBANK-AY680412; GENBANK-AY680413; GENBANK-AY680414; GENBANK-AY680415; GENBANK-AY680416; GENBANK-AY680417; GENBANK-AY680418; GENBANK-AY680419; GENBANK-AY680420; GENBANK-AY680421; GENBANK-AY680422; GENBANK-AY680423; GENBANK-AY680424
ENTRY MONTH: 200501
ENTRY DATE: Entered STN: 19 Oct 2004
Last Updated on STN: 4 Jan 2005
Entered Medline: 3 Jan 2005

AB 1-Aminocyclopropane-1-carboxylate synthase (ACS) catalyzes the rate-limiting step in the ethylene biosynthetic pathway in plants. The Arabidopsis genome encodes nine ACS polypeptides that form eight functional (ACS2, ACS4-9, and ACS11) homodimers and one nonfunctional (ACS1) homodimer. Transgenic Arabidopsis lines were constructed expressing the beta-glucuronidase (GUS) and green fluorescence protein (GFP) reporter genes from the promoter of each of the gene family members to determine their patterns of expression during plant development. All genes, except ACS9, are expressed in 5-d-old etiolated or light-grown seedlings yielding distinct patterns of GUS staining. ACS9 expression is detected later in development. Unique and overlapping expression patterns were detected for all the family members in various organs of adult plants. ACS11 is uniquely expressed in the trichomes of sepals and ACS1 in the replum. Overlapping expression was observed in hypocotyl, roots, various parts of the flower (sepals, pedicle, style, etc.) and in the stigmatic and abscission zones of the silique. Exogenous indole-3-acetic acid (IAA) enhances the constitutive expression of ACS2, 4, 5, 6, 7, 8, and 11 in the root. Wounding of hypocotyl tissue inhibits the constitutive expression of ACS1 and ACS5 and induces the expression of ACS2, 4, 6, 7, 8, and 11. Inducers of ethylene production such as cold, heat, anaerobiosis, and Li(+) ions enhance or suppress the expression of various members of the gene family in the root of light-grown seedlings. Examination of GUS expression in transverse sections of cotyledons reveals that all ACS genes, except ACS9, are expressed in the epidermis cell layer, guard cells, and vascular tissue. Similar analysis with root tip tissue treated with IAA reveals unique and overlapping expression patterns in the various cell types of the lateral root cap, cell division, and cell expansion zones. IAA inducibility is gene-specific and cell type-dependent across the root tip zone. This limited comparative exploration of ACS gene family expression reveals constitutive spatial and temporal expression patterns of all gene family members throughout the growth period examined. The unique and overlapping

gene activity pattern detected reveals a combinatorial code of spatio-temporal coexpression among the various gene family members during plant development. This raises the prospect that functional ACS heterodimers may be formed in planta.

L3 ANSWER 2 OF 2 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:325152 BIOSIS
DOCUMENT NUMBER: PREV200600317296
TITLE: Methionine-stress: A pleiotropic approach in enhancing the efficacy of chemotherapy.
AUTHOR(S): Kokkinakis, Demetrius A. [Reprint Author]
CORPORATE SOURCE: Univ Pittsburgh, Dept Pathol, 5117 Ctr Ave, Pittsburgh, PA 15213 USA
kokkinakisdm@upmc.edu
SOURCE: Cancer Letters, (FEB 28 2006) Vol. 233, No. 2, pp. 195-207.
CODEN: CALEDQ. ISSN: 0304-3835.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 21 Jun 2006
Last Updated on STN: 21 Jun 2006

AB Malignant cells fail to utilize homocysteine (FICYS) in place of methionine (MET) and they are dependent on exogenous MET for growth. In animals, reduction of plasma MET to < 5 mu M can be induced by combined dietary restriction of MET and administration of L-methionine-alpha-deamino-gamma-lyase (methioninase). This treatment, terined Lis MET-stress, inhibits the growth of brain tumor xenografts in athymic mice and enhances the efficacy of DNA alkylating chemotherapeutic agents. The response of tumors to MET-stress depends on their mutational status, however, it always involves inhibition of CDK1 and in most cases the upregulation of p21, p27, GADDs and 14-3-3 sigma in response to upregulation of TGF-beta, IRF-1, TNF-alpha, Rb and/or MDA-7 and the downregulation of P13K, RAS and NF-kappa B. Although inhibition of the cell cycle and mitosis is not necessarily dependent oil the tumor's p53 status, the expression of p21, GADD45 and apoptosis related genes (BAX, BCL-2) are regulated by wt-p53, ill addition to their regulation by TGF-beta or MDA-7 in mutated p53 tumors. Mutational variability determines the mode of death (mitotic catastrophe versus apoptosis) in tumor cells subjected to MET-stress. The increase of the efficacy of alkylating agents is related to marked inhibition of O(6-)rnethylguanine-DNA methyltransferase (MGMT) expression, the induction of cell cycle check points and the inhibition of pro-survival pathways by MET-stress.

=> d ibib abs l4 1-5

L4 ANSWER 1 OF 5 MEDLINE on STN
ACCESSION NUMBER: 88048324 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2823711
TITLE: Effect of lipid hydroperoxide on Xenopus oocytes and on neurotransmitter receptors synthesized in Xenopus oocytes injected with exogenous mRNA.
AUTHOR: Aoshima H; Anan M; Ishii H
CORPORATE SOURCE: Department of Chemistry, Faculty of Liberal Arts, Yamaguchi University, Japan.
SOURCE: Archives of biochemistry and biophysics, (1987 Nov 1) Vol. 258, No. 2, pp. 324-31.
Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198711

ENTRY DATE: Entered STN: 5 Mar 1990
Last Updated on STN: 5 Mar 1990
Entered Medline: 27 Nov 1987

AB The effect of 13-L-hydroperoxylinoleic acid (LOOH) on both Xenopus oocytes and neurotransmitter receptors synthesized in the oocytes was studied by electrophysiological and ion flux measurement. Addition of LOOH to the incubation mixture of the oocytes raised the membrane potential and decreased the membrane resistance of the oocytes. These effects of LOOH on the oocytes were reversed within a few hours by incubation with frog Ringer solution. Addition of LOOH also caused an increase of Li + and 45Ca2+ uptake into the oocytes. However, production of alkoxy radicals by the addition of FeCl2 to the incubation mixture containing LOOH did not accelerate the damage to the oocytes by LOOH. So essential toxicity is caused possibly by an increase in the membrane permeability resulting from disturbance of the lipid bilayer arrangement, not from production of active alkoxy radicals during decomposition of LOOH. Nicotinic acetylcholine and gamma-aminobutyric acid receptors were synthesized in Xenopus oocytes by injecting mRNA prepared from Electrophorus electricus electroplax and rat brain. LOOH noncompetitively inhibited the function of these receptors and also increased the rate of desensitization of the receptors.

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:910375 CAPLUS
DOCUMENT NUMBER: 138:166684
TITLE: Role of hydrogen peroxide in salicylic acid-induced stomatal closure in Vicia faba guard cells
AUTHOR(S): Dong, Facai; Wang, Pengtao; Zhang, Lin; Song, Chunpeng
CORPORATE SOURCE: Department of Biology, Henan University, Kaifeng, 475001, Peop. Rep. China
SOURCE: Zhiwu Shengli Xuebao (2001), 27(4), 296-302
CODEN: CWSPDA; ISSN: 0257-4829
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Many plant pathogens can penetrate leaf tissues through stomatal opening, so narrowing stomatal apertures may be advantageous for plant defense. The evidence was provided that H2O2 may function as an intermediate in salicylic acid (SA) signal in guard cells by epidermal strips bioassay and laser scanning confocal microscopy. SA can induce stomatal closure with a concentration-dependent manner, and H2O2 has the similar effect as SA. The effect of stomatal closure induced by SA at 100 μmol/L could be reversed evidently by CAT 20 U/mL or Vc 10 mmol/L, resp., but CAT or Vc alone treatment promoted stomatal opening slightly over the control. Time course expts. of single-cell assay based on fluorescent probe DCFH showed that the generation of H2O2 in guard cells could be induced by exogenous (Plate I) or endogenous SA 100 μmol/L (Plate LI) by directly addition or microinjection into one guard cell of a stoma, but distilled water microinjection as control caused no changes in DCFH fluorescent (Plate LI). These results suggest that the plant infected by pathogens may close their stomata via a pathway involving H2O2 production, thus interfering with the continuous invasion of pathogens through the stomatal pores.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1987:612284 CAPLUS
DOCUMENT NUMBER: 107:212284
TITLE: Effect of lipid hydroperoxide on Xenopus oocytes and on neurotransmitter receptors synthesized by Xenopus oocytes injected with exogenous mRNA
AUTHOR(S): Aoshima, Hitoshi; Anan, Makoto; Ishii, Hisashi

CORPORATE SOURCE: Fac. Liberal Arts, Yamaguchi Univ., Yamaguchi, 753, Japan
SOURCE: Archives of Biochemistry and Biophysics (1987), 258(2), 324-31
CODEN: ABBIA4; ISSN: 0003-9861
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of 13-L-hydroperoxylinoleic acid (LOOH) on both Xenopus oocytes and neurotransmitter receptors synthesized in the oocytes was studied by electrophysiol. and ion flux measurement. Addition of LOOH to the incubation mixture of the oocytes raised the membrane potential and decreased the membrane resistance of the oocytes. These effects of LOOH on the oocytes were reversed within a few hours by incubation with frog Ringer solution Addition of LOOH also caused an increase of Li+ and 45Ca2+ uptake into the oocytes. However, production of alkoxy radicals by the addition of FeCl2 to the incubation mixture containing LOOH did not accelerate the damage to the oocytes by LOOH. So essential toxicity is caused possibly by an increase in the membrane permeability resulting from disturbance of the lipid bilayer arrangement, not from production of active alkoxy radicals during decomposition of LOOH. Nicotinic acetylcholine and GABA receptors were synthesized in Xenopus oocytes by injecting mRNA prepared from Electrophorus electricus electroplax and rat brain. LOOH non-competitively inhibited the function of these receptors and also increased the rate of desensitization of the receptors.

L4 ANSWER 4 OF 5 BIOTECHNO COPYRIGHT 2007 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1995:25250710 BIOTECHNO
TITLE: The oxidation of hemocyanin. Kinetics, reaction mechanism and characterization of Met-hemocyanin product
AUTHOR: Beltramini M.; Bubacco L.; Casella L.; Alzuet G.; Gullotti M.; Salvato B.
CORPORATE SOURCE: Department of Biology, Via Trieste 75,I-35131 Padova, Italy.
SOURCE: European Journal of Biochemistry, (1995), 232/1 (98-105)
CODEN: EJBCAI ISSN: 0014-2956
DOCUMENT TYPE: Journal; Article
COUNTRY: Germany, Federal Republic of
LANGUAGE: English
SUMMARY LANGUAGE: English

AN 1995:25250710 BIOTECHNO
AB The reaction that gives met-hemocyanin from Octopus vulgaris oxy-hemocyanin has been reinvestigated under several experimental conditions. Various anions including azide, fluoride and acetate have been found to promote this reaction. Kinetic data indicate that the reaction mechanism is different from that currently accepted involving a peroxide displacement of bound dioxygen through an associative chemistry on an open axial position of the copper ions ¢Hepp, A. F., Himmelwright, R. S., Eickman, N. C. and Solomon, E. I. (1979) Biochem. Biophys. Res. Commun. 89, 1050-1057; Solomon, E. I. in Copper proteins (Spiro, T. G., ed.) pp. 43-108, J. Wiley, New York!. Our study suggests that the protonated form of the anion is Likely to be the species reacting with the oxygenated form of the protein. Furthermore, it is also proposed that protonation of bound dioxygen generates an intermediate hydroperoxo-dicopper(II) complex to which the exogenous anion is also bound. This intermediate in not accumulated and precedes the release of hydrogen peroxide by reaction with water. Upon dialysis it leads to the met-hemocyanin form. The structure of this dinuclear copper(lI) derivative contains a di-μ-hydroxo bridge but there is evidence from optical and circular dichroism spectra for partial protonation of these bridges at low pH. As a consequence, while one azide molecule binds in the bridging mode to

met-hemocyanin with low affinity (K = 30 M.sup.-.sup.1) at pH 7.0, it binds with much higher affinity at pH 5.5 (K = 1500 M.sup.-.sup.1), where a second azide ligand also binds in the terminal mode (K = 20 M.sup.-.sup.1). The coordination mode of the azide ligands is deduced from the optical and circular dichroism spectra of the protein complexes.

L4 ANSWER 5 OF 5 EMBASE

ACCESSION NUMBER: 95250500 EMBASE
DOCUMENT NUMBER: 1995250500
TITLE: The oxidation of hemocyanin. Kinetics, reaction mechanism and characterization of Met-hemocyanin product.
AUTHOR: Beltramini M.; Bubacco L.; Casella L.; Alzuet G.; Gullotti M.; Salvato B.
CORPORATE SOURCE: Department of Biology, Via Trieste 75,I-35131 Padova, Italy
SOURCE: European Journal of Biochemistry, (1995) Vol. 232, No. 1, pp. 98-105. .
ISSN: 0014-2956 CODEN: EJBCAI
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 12 Sep 1995
Last Updated on STN: 12 Sep 1995

AB The reaction that gives met-hemocyanin from Octopus vulgaris oxy-hemocyanin has been reinvestigated under several experimental conditions. Various anions including azide, fluoride and acetate have been found to promote this reaction. Kinetic data indicate that the reaction mechanism is different from that currently accepted involving a peroxide displacement of bound dioxygen through an associative chemistry on an open axial position of the copper ions [Hepp, A. F., Himmelwright, R. S., Eickman, N. C. and Solomon, E. I. (1979) Biochem. Biophys. Res. Commun. 89, 1050-1057; Solomon, E. I. in Copper proteins (Spiro, T. G., ed.) pp. 43-108, J. Wiley, New York]. Our study suggests that the protonated form of the anion is Likely to be the species reacting with the oxygenated form of the protein. Furthermore, it is also proposed that protonation of bound dioxygen generates an intermediate hydroperoxo-dicopper(II) complex to which the exogenous anion is also bound. This intermediate in not accumulated and precedes the release of hydrogen peroxide by reaction with water. Upon dialysis it leads to the met-hemocyanin form. The structure of this dinuclear copper(II) derivative contains a di-μ-hydroxo bridge but there is evidence from optical and circular dichroism spectra for partial protonation of these bridges at low pH. As a consequence, while one azide molecule binds in the bridging mode to met-hemocyanin with low affinity (K = 30 M-1) at pH 7.0, it binds with much higher affinity at pH 5.5 (K = 1500 M-1), where a second azide ligand also binds in the terminal mode (K = 20 M-1). The coordination mode of the azide ligands is deduced from the optical and circular dichroism spectra of the protein complexes.

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